# Global Climate Change Program: Africa

Addressing the causes and effects of climate change has been a key focus of USAID's development assistance for over a decade. USAID has funded environmental programs that have reduced greenhouse gas emissions while promoting energy efficiency, forest conservation, biodiversity, and other development goals. This "multiple benefits" approach to climate change helps developing and transition countries achieve economic development without sacrificing environmental protection. To help countries address domestic and international climate change priorities, USAID's Global Climate Change Program is active in more than 40 countries and dedicates about $180 million a year to promote:

- Adaptation to climate change
- Land use and forestry
- Climate science for decision making
- Clean energy technology

Many countries in Africa face severe socio-economic challenges that are exacerbated by short and long-term climate stresses. Small disruptions can alter progress toward essential development goals such as reducing hunger, increasing incomes, decreasing poverty, improving governance and ensuring the health and longevity of the population. Because overall greenhouse gas emissions are low, but vulnerability to climate-related impacts is high, adapting to climate stresses is the principal challenge facing the African continent with respect to climate change. In Africa, USAID's Global Climate Change Program is active in the Democratic Republic of the Congo, Guinea, Madagascar, Malawi, Mali, Namibia, Senegal, South Africa, Sudan and Uganda, and is supported by four regional USAID programs: the Africa Regional Program, the Regional Economic Development Service Office (REDSO), the Regional Center for Southern Africa and the West African Regional Program (WARP).

Will Calewood, Solar Engineering Services

**A local official in the Durban area of South Africa found low-cost solar water heating simple enough that he installed it on his own.**

## Adaptation to Climate Change

USAID supports activities to help developing countries lessen their vulnerability and adapt to climate variability and change. These activities are intended to build more resilience into economic sectors that may be affected by climatic stresses, including agriculture, water, and key livelihood sectors in coastal areas. For example, the Famine Early Warning System Network (FEWS NET) operates in twenty countries in Africa. The program provides decision-makers with information to respond effectively to drought famine threats by analyzing remote-sensing data and ground-based meteorological, crop, and rangeland observations to identify early indications of potential famine. In addition to using data produced by host governments for its analyses, FEWS NET uses data from satellite imagery.

## Land Use and Forestry

Promoting biodiversity conservation, improved forest management, and sustainable agriculture, USAID programs help mitigate climate change by absorbing and storing carbon dioxide from the atmosphere. They also help reduce the vulnerability of ecosystems to climate change. Reduced-impact logging of forests minimizes loss of vegetative cover, for instance, which helps stabilize the soil and prevent it from eroding away during rain and windstorms. Reduced tillage and contour planting by farmers increase soil organic carbon and therefore soil fertility, which helps increase food security in developing countries.

Carrie Stokes, USAID/Washington

**Congolese foresters review management plans for reduced impact logging practices in the northern Republic of Congo, where USAID is studying the impacts on carbon stocks.**

In Africa, the Central African Regional Program for the Environment (CARPE) focuses its efforts across the Congo Basin, which contains massive expanses of closed-canopy tropical forest. The region is threatened by unsustainable timber exploitation, shifting cultivation, urban expansion, and decades of human conflict. In addition to providing other valuable ecosystem services, the large forested area of the Congo Basin serves as a globally important carbon stock. CARPE's principal goal is to reduce the rate of forest degradation and

Solar Light for Africa

**Volunteers test a new clean water system near a health clinic in Uganda, a partnership between USAID and Solar Light for Africa.**

biodiversity loss through increased local, national, and regional natural resource management. Key activities include protected areas management, natural resource management planning, integrated landscape management planning, improved logging policies, sustainable forest use by local inhabitants, and improved environmental governance. USAID's efforts in this region have helped establish the Congo Basin Forest Partnership, which has resulted in a legally binding treaty amongst seven Central African countries to implement transboundary conservation and natural resource management activities spanning an area of 67 million hectares.

## Climate Science for Decision Making

USAID is also involved in U.S. and international climate change research to ensure that science produces information needed for global development challenges and that scientific findings guide development planning. Informed policy decisions are essential to sustainable natural resource management and economic development, key priorities of USAID. For example, USAID supports long-term research partnerships between U.S. universities, developing-country research institutions, U.S. agribusiness, and private voluntary organizations through Collaborative Research Support Programs (CRSPs). CRSPs research issues of agricultural productivity and sustainability, food quality, and natural resource management that benefit both developing countries and the U.S.

## Clean Energy Technology

Finally, new technologies and practices offer the prospect for continued economic growth with reduced greenhouse gas emissions. Recognizing that increased productivity and efficiency are critical to economic growth, USAID supports the commercialization, dissemination, and widespread adoption of environmentally sound technologies. Attracting private investment is essential to popularizing such technologies. For example, USAID promotes low-cost solar lighting and water purification systems for rural hospitals, schools and orphanages in East Africa through partnership with Solar Light for Africa, a faith-based non-governmental organization. To date, 1,400 solar lighting and water purification systems have been installed in rural health clinics, schools, orphanages, community centers, and other public facilities in six East African countries, including the solar electrification of the Kakuuto Hospital located in the Rakai District of Uganda, where the AIDS epidemic was first identified.

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*Foresters and scientists assess the carbon impact of felled tree on surrounding forest in northern Republic of Congo.* (Carrie Stokes, USAID/Washington)

*Artisans in Mali make improved efficiency, wood-burning cook stoves.* (Enterprise Works – Mali)

*Local communities in Guinea learn to manage valuable forest resources through reforestation and sustainable agroforestry practices.* (Laura Lartigue, USAID/Guinea)

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